

Work Order ID 78476

January-10-12 9:52:10 AM

Item ID: D2916-1
Revision ID:
Item Name: Cable Guard, 212 Skidtube
Start Date: 10/01/2012 Start Qty:
Required Date: 24/01/2012 Req'd Qty:
Reference:

Approvals: Process Plan:
QC:

Sequence ID/
Work Center ID

130 QC2- Insp
130
QC
Quality Control

140 QC8- Insp
140
QC
Quality Control

150 Identify as
150
Packaging
Packaging

Work Order ID 78476

January-10-12 9:52:10 AM

Item ID: D2916-1
Revision ID:
Item Name: Cable Guard, 212 Skidtube
Start Date: 10/01/2012 Start Qty: 20.00
Required Date: 24/01/2012 Req'd Qty: 20.00
Reference:

Approvals: Process Plan: M.L.S
QC:

Sequence ID/
Work Center ID

Draw Nbr Revision Nbr
D2916 Rev D

100
100
Waterjet
FLOW CNC Waterjet
Memo
1-Cut as per Dwg D2916 Dwg Rev: D Prog Rev: D 2-
Deburr if necessary

110 QC2- Inspect parts off machine FAI/FAIB
110
QC
Quality Control
Memo

120
120
HAAS I
HAAS CNC vertical machine #1
Memo

BATCH: 1- Mill as per Folio FB077 Rev: AA
& Dwg D2916 Rev: 2-Deburr per dwg D2916

78476

Page 1

Accept

N900040100

Setup Start *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Date: 12/01/10 Tooling:
Date: SPC (Y/N):
Date:

Run Start *NR1*
Stop *NR2*

Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

0.00

0.00

0.00

0.00

0.00

0.00

B12-1-11

B12-1-11

12/01/2012 21

Dart Aerospace Ltd

W/O:		
DATE	STEP	

Part No: _____

Resolution: _____

NCR:		
DATE	STEP	Description

NOTE: Date & initial all entries

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-10-12 9:52:14 AM

Page 1

Work Order ID: 78476

78476

Parent Item: D2916-1

D2916-1

Parent Item Name: Cable Guard, 212 Skidtube

Start Date: 10/01/2012

Required Date: 24/01/2012

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP Rev:A New Issue 06-06-19 JLM
IPP Rev:B Now water jet 06-07-14 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			100	sf	559.6443	0.475	10			

MUHMWB10

UHMW 1" Black

**

1812-1-11

Location

Loc Qty

Loc Code

MAT018

300

120035

300

MAT019

259.6443158

117321

74.6

117738

95.8

117819

83.3

118814

1.5

119145

4.44431579

120035

24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHOW
RET
ENC
UNCONT
SUBJECT
WITH
W

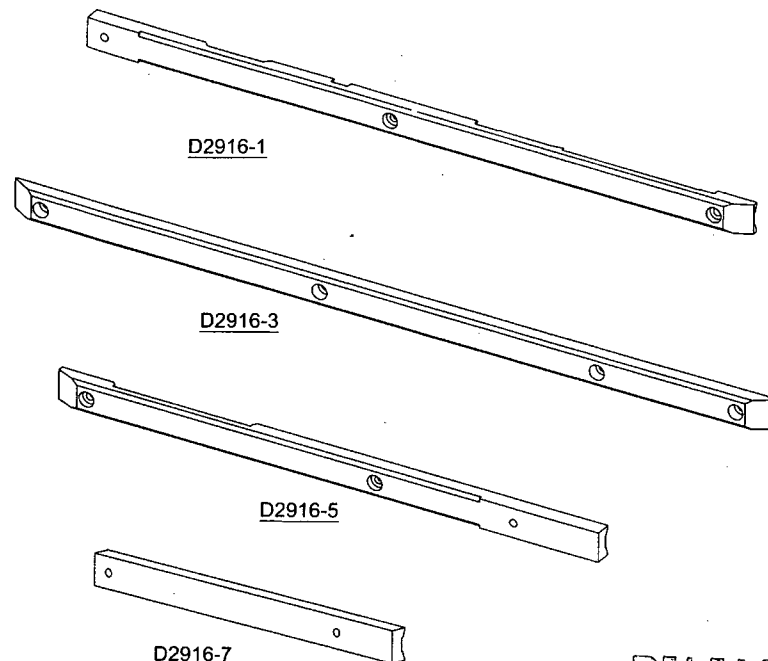
NO. 78476 M.C.J.
12/01/10

NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL
REF DART SPEC MUHMB10
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL UNMARKED RADII 0.020 TO 0.040
- 6) IDENTIFICATION: ENGRAVE P/N ON LOWER SIDE TO MAX DEPTH OF 0.010 AND MIN RADIUS OF 0.010
- 7) WEIGHT:

D2916-1 = 1.37 lbs
D2916-3 = 2.33 lbs
D2916-5 = 1.19 lbs
D2916-7 = 0.96 lbs

- 8) ENGRAVE TWO DART LOGOS (OPPOSITE AS SHOWN) ON UPPER SIDE TO MAX DEPTH OF 0.015 AND MIN RADIUS OF 0.250
- 9) MACHINE CONSTANT SECTION A-A
- 10) MACHINE CONSTANT SECTION B-B
- 11) MACHINE CONSTANT SECTION C-C
- 12) MACHINE CONSTANT SECTION F-F
- 13) MACHINE CONSTANT SECTION G-G
- 14) 25° ANGLE OF TRANSITION BETWEEN SECTIONS WITH MIN RADIUS OF 0.50
- 15) 50° ANGLE OF TRANSITION BETWEEN SECTIONS WITH MIN RADIUS OF 0.50
- 16) MACHINE SLOT WITH 0.063 RADIUS OF TRANSITION BETWEEN SECTIONS
- 17) ALL HOLES DRILLED ON CENTERLINES



RELEASED
2011-11-02
MP

D	REVISE MACHINE SLOT. (ZN C5-2, C4-4, C4-5, C6-5) REVISE SECTIONS D-D, L-L, N-N	RF	11.10.07
C	REVISE D-D; ADD L-L, M-M & N-N; FOR D4406-041/-043 COMPATIBILITY	RF	11.08.17
B	ADD K-K FOR D2521 COMPATIBILITY	CP	00.02.24
A	NEW ISSUE	CP	99.09.29
REV.	DESCRIPTION	BY	DATE
DESIGN	4	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	4	DRAWING NO.	REV. D
MFG. APPR.	4	D2916	SHEET 1 OF 6
APPROVED	4	TITLE	SCALE
DE APPR.	4	CABLE GUARD	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

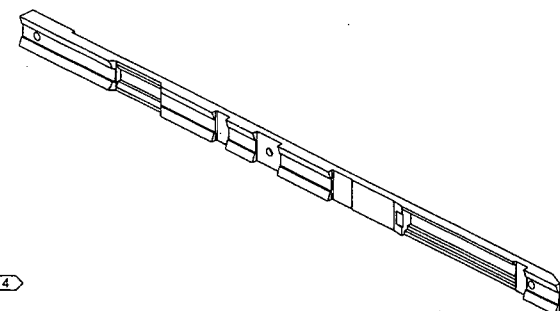
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78476



RELEASE
2011-11-02

DESIGN	4	DART AEROSPACE LTD HAWKESSBURY, ONTARIO, CANADA DRAWING NO. D2916 TITLE CABLE GUARD SCALE NTS	REV. D
DRAWN	RF		SHEET 2 OF 6
CHECKED	4		
MFG. APPR.	4		
APPROVED	4		
DE APPR.	4		
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

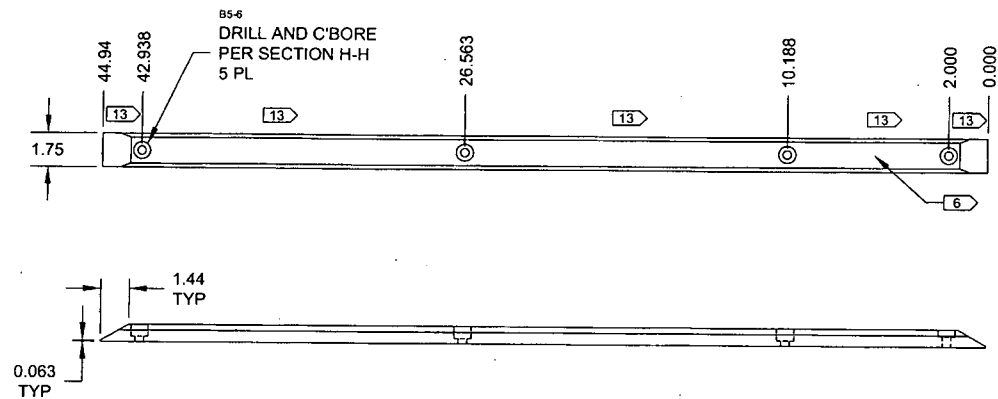
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78476



D2916-3

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2011-11-02
JMP

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MFG. APPR.	4	SHEET 3 OF 6	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

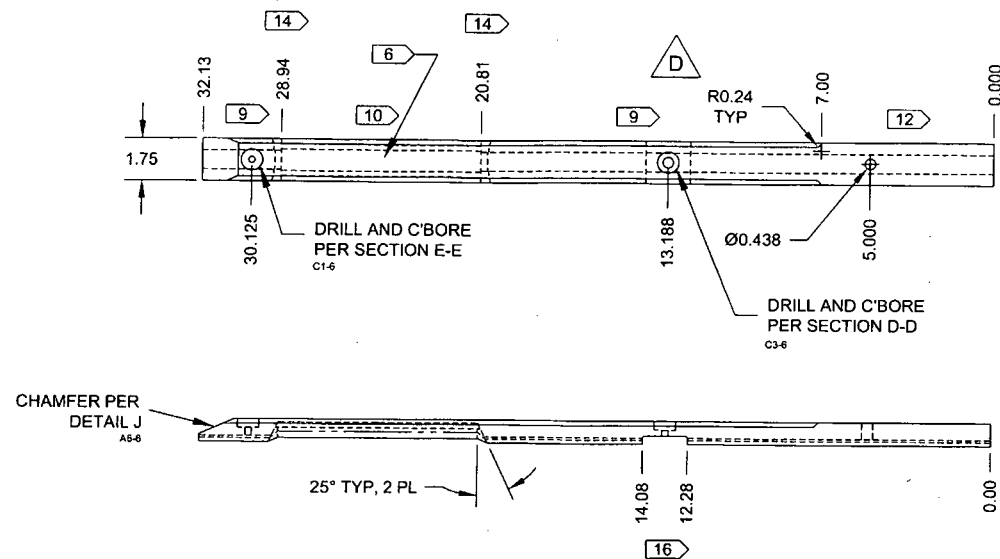
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78476



D2916-5

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2011-11-02
JWO

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MFG. APPR.	4	D2916	SHEET 4 OF 6
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

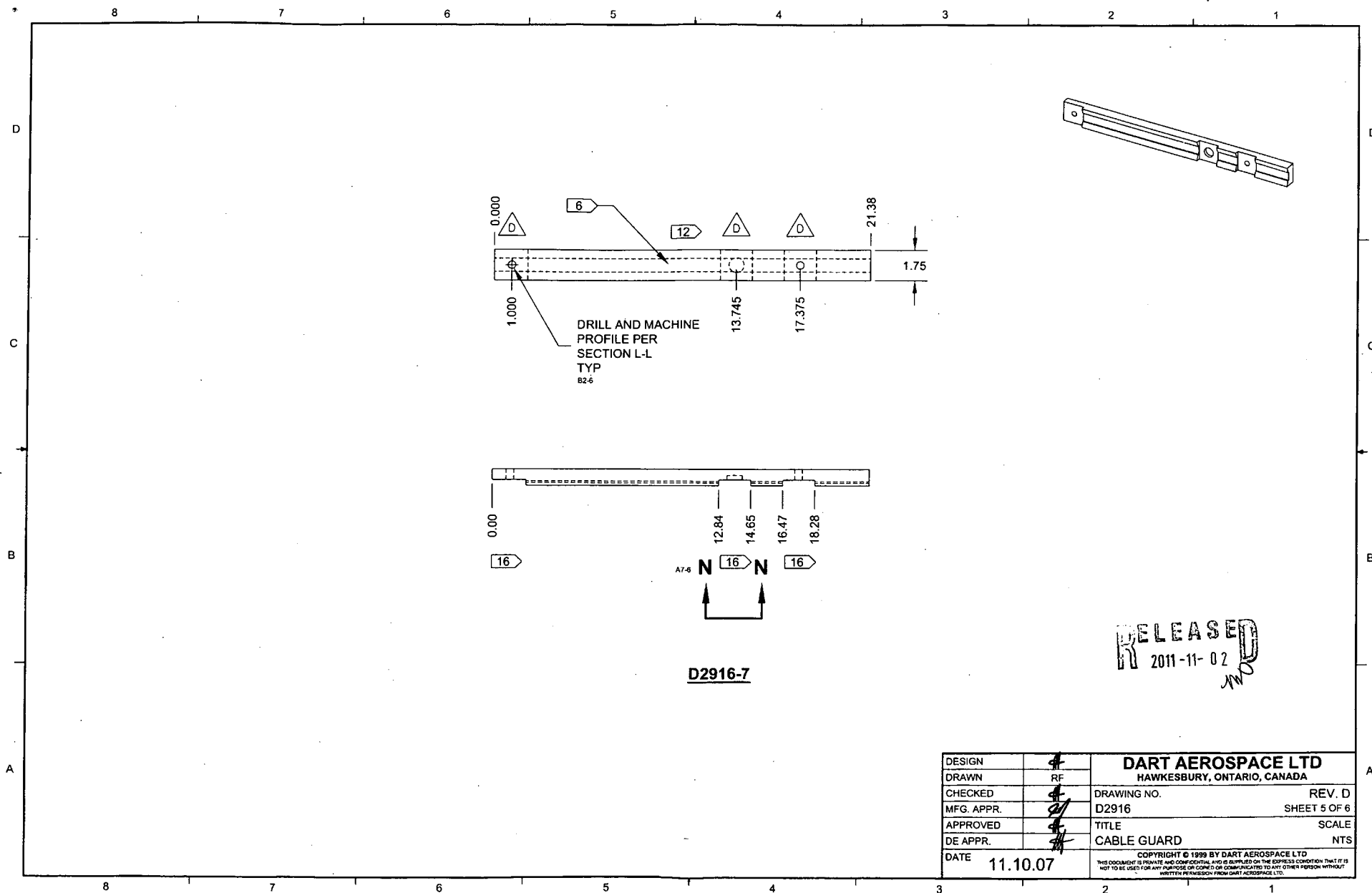
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78476



D2916-7

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2011-11-02
JND

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	#	DRAWING NO.	REV. D
MFG. APPR.	#	D2916	SHEET 5 OF 6
APPROVED	#	TITLE	SCALE
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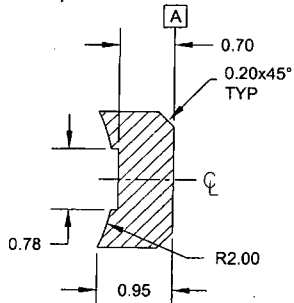
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

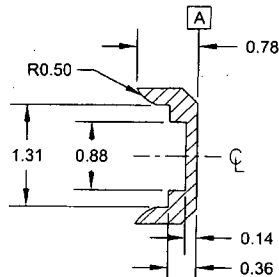
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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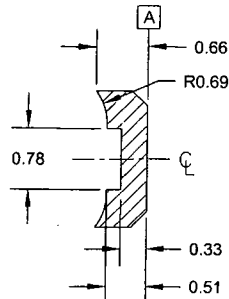
78476



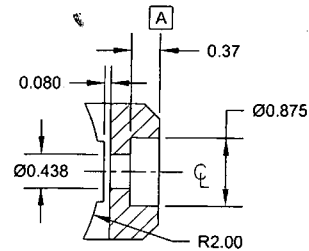
SECTION A-A
SCALE 4X
C3-2
C6-2
C4-4
C6-4



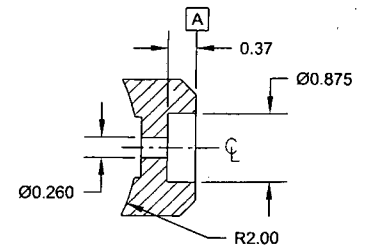
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SCALE 4X
C3-2
C5-4



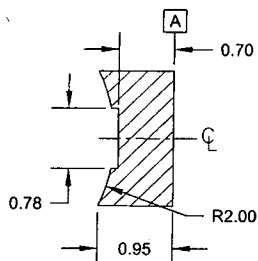
SECTION C-C
SCALE 4X
C5-2
C4-2



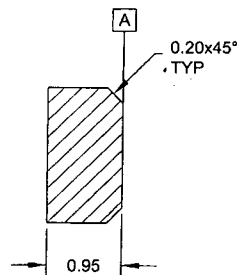
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SCALE 4X
C4-2
C3-4



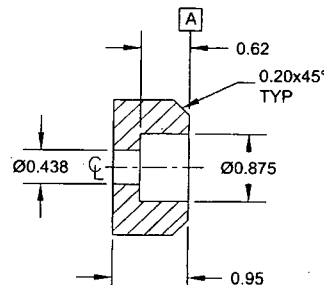
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C5-4



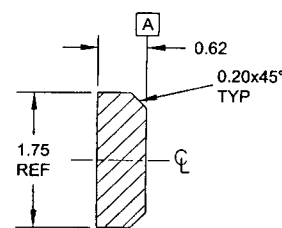
SECTION F-F
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C6-2
C3-4
C5-5



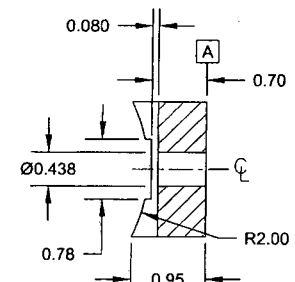
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SCALE 4X
C3-3
C4-3
C5-3
C6-3
C7-3



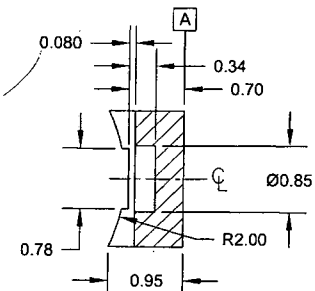
SECTION H-H
SCALE 4X
C6-3



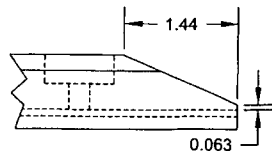
SECTION K-K
SCALE 4X
B3-2
B4-2
B5-2



SECTION L-L
SCALE 4X
C5-5



SECTION N-N
SCALE 4X
B6-5



DETAIL J
SCALE 4X
B3-2
B7-4

RELEASED
2011-11-02

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. D
MFG. APPR.	<i>[Signature]</i>	D2916	SHEET 6 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	CABLE GUARD	NTS
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 78476
Description: CABLE GUARD	Part Number: 02916-1
Inspection Dwg: 2916 Rev: 0	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.75	$\pm .03$	1.754	✓		Dial Caliper	BC05
37.938	$\pm .010$	37.938			Tape	BC09
Ø.438	$+.006 - .001$.437	✓			BC05
21.125	$\pm .010$	21.125	✓		Tape	BC09
2.000	$\pm .010$	2.005	✓			BC05
3.19	$\pm .03$	3.190	✓			
11.71	$\pm .03$	11.71	✓			
15.00	$\pm .03$	15.000	✓			
29.00	$\pm .03$	29.00	✓			
32.25	$\pm .03$	32.25	✓			
35.94	$\pm .03$	35.94	✓			
38.94	$\pm .03$	38.940	✓			
25.00	$\pm .03$	25.00	✓			
24.00	"	24.00	✓			
22.03	"	22.03	✓			
20.22	"	22.03	✓			
16.50	"	16.50	✓			
15.01	"	15.01	✓			
3.25	"	3.25	✓			
2.33	"	2.33	✓			
.78	$\pm .03$.778	✓			
1.31	"	1.300	✓			
.95	"	.945	✓			

Measured by: ZK/PR	Audited by: OR	Preliminary Approval:
Date: 12/01/19	Date: 12/01/26	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

